

AMENDMENTS TO THE SUBSTITUTE SPECIFICATION:

Please delete page 1, paragraph [0002].

~~[0002] This application is related to applicants' co-pending application serial number 10/240,317 filed October 1, 2002.~~

Please amend paragraph [0009] on page 3:

[0009] The feed input 5 is followed by a distribution network ("||S||")⁷ which, in the illustrated example, supplies two RF phase shift assemblies 9', 9'' with each of the two phase shift assemblies supplying two dipoles.

Please amend paragraph [0013] beginning on page 4:

[0013] In consequence, the phase shift assembly 9' therefore ensures a split of $+2\phi$ and -2ϕ , and the second phase shift assembly 9'' ensures a phase shift of $+\phi$ and $-\phi$, for the respectively associated dipole radiating elements 1a, 1e and 1b, 1d, respectively. A correspondingly different setting for the phase shift assemblies 9', 9'' can then be ensured by a mechanical actuating drive 17. In this example, a comparatively complex mechanical step-up transmission drive 17 is used to produce the different phase differences required for the respective individual radiating elements.

Please amend paragraph [0036] beginning on page 9:

[0036] The tapping element 25 includes a first connection line 31a. Connection line 31a extends from the coupling section 33 in the overlapping area of the center tap 29 to the tapping point 27a on the inner stripline segment 21a. The region which projects as

an extension beyond this tapping point 27a forms the next connection section or connection line 31b. Connection line 31b leads to the tapping point 27b which is formed in the region in which it overlaps the outer stripline segment 21b. The distance between the stripline sections segments 21a-21d may be for example 0.1 to 1.0 times the transmitted RF wavelength.

Please amend page 10, paragraph [0037]:

[0037] The entire RF phase shift assembly is designed with the four dipoles 1a, 1b, 1c, 1d which are shown in the exemplary embodiment in Figure 2 jointly on a metallic base plate 35, which also provides the reflector 35 for the dipoles 1a, 1b, 1c, 1d. Stripline segment 21a (see also Figure 3) includes ends 39a, 39a' which connect to antenna elements 1c, 1b through connections ~~41c, 41b~~ 41d, 41a, respectively and stripline segment 21b (see also Figure 3) includes ends 39b, 39b' which connect to antenna elements 1d, 1a through connections 41a, 41b respectively.

Please amend page 10, paragraph [0038]:

[0038] In the horizontal cross-sectional illustration shown in Figure 3, it can be seen that the coupling is capacitive not only at the center tap 29 but also at the tapping points 27a, 27b. In this example case, low-loss dielectrics 37 provide the capacitive coupling and, at the same time, provide the mechanical fixing both for the center tap 29 and for the tapping points 27a, 27b which are radially offset with respect to it.

Please amend page 11, paragraph [0040]:

[0040] The cross-sectional illustration in Figure 3 also shows that the stripline segments 21a, 21b, which are in the form of circle segments, are likewise located at the same distance as the center tap 29 from the reflector plate ~~37~~35, and are coupled to the tapping element 25 via the dielectric 37 that is formed there. The tapping element 25 is in this case a uniformly rigid lever, which can be moved about the pivoting axis 23. See description of Figure 2 above for similarly labeled elements. In addition, it has been found to be advantageous for the phase shift assembly to be shielded by a metallic cover
M.

Please amend page 11, paragraph [0041]:

[0041] Rotation of the tapping element 25 about the pivoting axis 23 now allows the phase to be set, with the appropriate phase offset from $+2\Phi$ to -2Φ , jointly for all the dipole radiating elements 1a, 1b, 1c, 1d. See Figure 2.

Please amend page 11, paragraph [0042]:

[0042] Suitable selection of the characteristic impedances and suitable regions of the connections 31a and 31b between the corresponding tapping points 29 as well as tapping points 27a and 27b, respectively, now allows the power to be shared at the same time between the dipole radiating elements 1a and 1d, on the one hand, and the further pair of dipole radiating elements 1b and 1c. The dipole antennas 1a to 1d are connected via antenna lines 41 to each end 39a and 39b, respectively, of the stripline segments 21a, 21b, which are in the form of circle segments (see Figure 2).

Please amend paragraph [0043], beginning on page 11:

[0043] A modified exemplary implementation with a total of six dipole radiating elements 1a, 1b, 1c, 1d, 1e, 1f is shown in Figure 4, allowing phase shifts from $+3\phi$ to -3ϕ to be achieved in this case (similarly labeled elements as compared to Figure 2 have similar functions). Furthermore, if required, it is possible to achieve power sharing, for example from outside to inside, which allows power steps of 0.5 : 0.7 : 1. Description of similarly labeled elements in Figure 2 will not be repeated here.

Please amend page 12, paragraph [0045]:

[0045] Figure 5 shows two straight stripline sections 21a and 21b, which are offset with respect to one another and, in the illustrated exemplary implementation, are offset with respect to one another through 180° with respect to the pivoting axis 23 (similarly labeled elements as compared to Figure 2 have similar functions). A conversion would be feasible to the extent that the stripline sections 21a and 21b, which are shown in Figure 5, are arranged such that they run parallel to one another and run in straight lines, are arranged on the same side of the center tap 29 and, at the same time, are covered by a single tapping element 25 in the form of a pointer. Description of similarly labeled elements in Figure 2 will not be repeated here.

Please amend page 12, paragraph [0046]:

[0046] Figures 6a and 6b show the effect of a correspondingly designed antenna on the vertical polar diagram. A relatively small phase difference between the five dipoles which are shown schematically there results in a relatively small vertical

depression angle (e.g., of 4° as depicted in Figure 6a), and relatively large phase difference, set via the radio-frequency phase shifter group which has been explained, results in a relatively large vertical depression angle (e.g., of 10° as depicted in Figure 6b).